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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,634	06/07/2001	Takashi Tagami	NSG-194US	5005
23122	7590	07/27/2005	EXAMINER	
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			TRAN, DZUNG D	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/857,634

Applicant(s)

TAGAMI ET AL.

Examiner

Dzung D. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 4-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang US patent no. 6,268,943 in view of Terahara US patent no. 6,271,495.

Regarding claim 1, Kang discloses an optical SNR measurer in a WDM optical device having plurality optical detector (106, 108, 110, 112) for receiving light beams (CH0, CH1, CH2, ... CH_{n+1}) from a wavelength multiplexed light beam 120, comprising:

a plurality of light-receiving elements (e.g. optical detectors 106, 108) for monitoring optical signal CH1, CH2, CH3, ..., CH_n (abstract, figure 2, col. 4, lines 45-49);

a plurality of light-receiving elements (e.g. optical detectors 110, 112) for monitoring noises (abstract, col. 4, lines 49-54), wherein the light-receiving element for monitoring optical signal and light-receiving element for monitoring noise are arranged alternately (see figures 2, 3, col. 4, lines 38-40).

Kang further discloses in col. 5, lines 28-38, the number of noise channels or their associated signal channels (equivalent to optical channels) can be one or more, can be employed. In addition a channel between some adjacent signal channels within a signal wavelength may be designated as a noise channel (equivalent to the light-receiving element for monitoring optical signal and light-receiving element for monitoring noise are arranged alternately).

Kang differs from claim 1 of the present invention in that Kang does not specifically disclose the light-receiving elements are arranged in an array of a straight line. Terahara discloses an apparatus for monitoring the WDM system (figure 7) having light-receiving elements array (e.g. photodiode array 54, col. 8, line 1) are arranged in a straight line the direction is the same as that of the arrangement of the demultiplexed light beams (e.g. light dispersing device 50). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate a plurality optical detectors (106, 108, 110, 112) of Kang into an array, such as array 54 of Terahara. One of ordinary skill in the art would have been motivate to do this in order to take advantages of fact that a photodiode array has a small size, low power supply requirements, and cost, broad spectral response, low noise, ruggedness and stability. Furthermore, whether or not to arrange a plurality of photodiodes in an array of a straight line would have been within the knowledge of a person having ordinary skill in the art and would have been an obvious engineering design choice.

Regarding claim 2, Terahara further discloses the light-receiving element for monitoring optical signal and light-receiving element for monitoring noise are PIN photodiode (col. 8, line 14).

Regarding claim 3, Terahara discloses light-receiving elements array (e.g. photodiode array 54, col. 8, line 1) receive light beams demultiplexed every wavelengths (ch. 1, ch. 2, ..ch. m) are arranged in the straight line (see figure 7). Kang further discloses the signals and noises for each of respective channels are separated to be monitored by the light receiving element (figure 2, col. 5, lines 28-38).

Response to Argument

3. Applicant's arguments filed on 05/16/2005 have been fully considered but they are not persuasive.

A. Rejection of claim 1 under *USC § 103(a)* as being unpatentable over Kang US patent no. 6,268,943 in view of Terahara US patent no. 6,271,495.

Applicant argues that Kang is silent regarding the plurality of light receiving elements for monitoring signals for each of the respective channels and a plurality of light receiving elements for monitoring noises for each of the respective channels wherein the light-receiving element for monitoring optical signal and light-receiving element for monitoring noise are alternately arrayed in a straight line. However, examiner submits that Kang clearly discloses in figure 2, a plurality of light-

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receiving elements (e.g. optical detectors 106, 108) for monitoring optical signal CH1, CH2, CH3, ..., CHn (abstract, figure 2, col. 4, lines 45-49);

a plurality of light-receiving elements (e.g. optical detectors 110, 112) for monitoring noises (abstract, col. 4, lines 49-54), wherein the light-receiving element for monitoring optical signal and light-receiving element for monitoring noise are arranged alternately (see figures 2, 3, col. 4, lines 38-40).

Kang further discloses in col. 5, lines 28-38, the number of noise channels or their associated signal channels can be one or more, or different numbers of noise channels and signal channels can be employed (e.g., the noise channels and signal channels can be arranged alternately). In addition a channel between some adjacent signal channels within a signal wavelength may be designated as a noise channel (equivalent to the light-receiving element for monitoring optical signal and light-receiving element for monitoring noise are arranged alternately). Furthermore, Terahara discloses an apparatus for monitoring the WDM system (figure 7) having light-receiving elements array (e.g. photodiode array 54, col. 8, line 1) are arranged in a straight line the direction is the same as that of the arrangement of the demultiplexed light beams (e.g. light dispersing device 50).

In response to applicant's arguments against the references individually such as Kang reference or Terahara reference does not discloses all the limitation of claim 1, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413,

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208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571) 272-3078. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran
07/21/2005



KENNETH VANDERPUYE
PRIMARY EXAMINER